

ITEMS OF INTEREST.

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Thoughts from the Profession.

THE NATURAL, AND THE SUPER-NATURAL.

DR. S. H. KING, LINCOLN, NEB.

[*Thoughts suggested by reading the article beginning on page 153 current Vol. of the Items.*]

It is astonishing to notice with what equanimity professional men,—men who are supposed to possess some knowledge of natural science,—attribute phenomena they do not understand to the *super-natural*. Such men are ever ready, when their superiors in science attempt to account for these phenomena by natural laws to cry *atheist!* when, in fact, these investigators, who study the Great Law Giver through his law, have a conception of God as much higher than the super-naturalist has, as the heavens are higher than the earth.

I was once crossing a bridge which spanned a short distance above its confluence with another stream, when my companion exclaimed in astonishment “My God ! Salt Creek is running up stream ! what is going to happen ? That is super-natural !” Sure enough there was a decided current in the opposite direction from the stream’s usual flow. I was not long in forming my opinion of the cause of this strange and exceptional freak of nature, but as our journey was to be up the valley of Oak Creek—the other stream referred to, I allowed my fellow traveller to luxuriate in the mental realm of the super-natural, which he did at intervals of alternate silence and expostulation. He assured me that he had “lived here nigh on to twenty years, and had never seen the like before.” Not till we had ascertained that heavy local showers along the Oak Creek valley had so swollen that stream, as to cause a back-flow in Salt Creek to which it was tributary, thus explaining to him the cause, did he descend from the mysterious atmosphere of the super-natural to that of reason. So it is with certain men of our profession. When some careful investigator who has spent many years gathering data, and from these formulates a theory which lightens the gloom of the mysterious, then these super-naturally inclined lift their

hands in holy horror, that the sanctity of the super-natural has been invaded. They are robbed of their choicest idol. If they would accept the light thus furnished, they might be "led through nature's law up to nature's God."

I do not understand that the development theory—the survival of the fittest, nor the theory that the modification of organs by a changed function or office which those organs are called on to perform, necessarily "exclude the true idea of a God;" in fact, I know that several of the authors of these theories have had the most exalted conception of an infinite Creator I have ever found entertained by any class of men.

What if we *do* find in "matter innate faculties for organization,"—which is only another term for natural law,—or suppose it should be demonstrated that spontaneous generation results from certain conditions and combinations of inert matter; would there be any the less a God above, beyond, and behind it all? Hence I submit to the reader, Which has the higher and better conception of an Infinite Creator, he who sees his creative power in the laws of matter, placed there by "Him in the beginninng," or he who finds it necessary for Him to be constantly creating by "special providence" and otherwise supplementing or interfering with his established law producing super-natural phenomena?

But the most extraordinary statement is that "the will of man rules supreme over all organic and inorganic nature." If this be true, then man's material immortality,—that which by nature he seems so greatly to desire,—must be within his reach, and he can defiantly snap his finger at the dread monster, death.

I have been taught that a man is powerless to revoke, or even to modify in the least degree, the inevitable, immutable laws of God,—laws of matter. True, man can under these laws utilize the elements to his benefit, he can harness them as he has electricity and make them serve him,—he can change *conditions*, and thereby bring into action another set of laws which may modify, develop, and improve the race, thus he can in a measure change results, but not the laws.

Therefore, if he would modify the form and structure of the dental organs, let him change their function. If he desires large, prominent and pointed cuspids, and sharp pointed cusps for the bicuspids and molars, let him return to the carnivorous habits of our early ancestors, and deprive himself of the culinary art and the use of cutlery, and, after many generations, no doubt, the desired modification would be perceptible. On the other hand, a granivorous diet, without the milling art, would in time give a people broad molars with short cusps and heavy enamel. But the more important lesson for civilized man

to learn is, that, if he would secure for himself and his posterity strong durable dentures, he must give them *exercise, work, function*.

Allow me to remark in conclusion that it is about time the term *super-natural*—unless applied to God himself—took its place along with *ghost, witch, etc.*, where enlightenment and intelligence have placed them.

HINTS FOR THE ITEMS.

L. P. HASKELL.

REPAIRING "CONTINUOUS GUM."

Intelligent members of the profession ought to know that continuous gum plates can be repaired with as much facility and certainty as rubber or gold work, and yet a patient, for whom I made a set of this work several years ago, and who had broken off a tooth, was informed by a dentist where she lived, that it could not be repaired, and as she was partial to this work, she allowed him to procure another set made, she having been informed that I had moved away from Chicago, and she was three hundred miles distant. The set proved an utter failure, and having ascertained that I had not moved, came to me. Of course she was highly indignant on learning how she had been imposed on, evidently from mercenary motives. I have known of other instances, where a dentist has so informed his patient, and has removed the teeth and gums and substituted a rubber gum, so as to repair the work.

I care not how badly broken the plate may be, nor how long it has been worn, I will as readily undertake its repair, as any other work. I know some who have made this work in days past, have abandoned it because they were not successful in its repair; not knowing just how to do it, but the whole secret lies in the *preparatory drying process*. When this is done, the case can be run into the muffle as readily as if it had never been worn.

ARTICULATING TEETH.

When will some dentists learn that it is just as important to have a proper articulation, as a properly fitting plate?

Many an otherwise perfect denture is rendered useless from this cause.

Among other things to be observed these are essential points:

The bearings should be on the *bicuspid*s and *first molars*, and uniform on both sides; a slight closure on one side, harder than on the other displaces the plate.

The six anterior teeth should not meet, but a good margin be left, at least an over-lap of one-sixteenth inch; and even then they will be found after a time to interfere, and crowd the upper plate forward and down from the rear.

If the second molar strikes when first worn, it will soon crowd, and if there is a lower denture, the plate will be forced into the membrane.

If there is a lower wisdom tooth, it often stands at an angle of forty-five degrees, and consequently, if it meets the upper tooth, will crowd the plate forward. Do not let them meet under these conditions.

It is important also that the bicuspids and molars stand at such an angle as to tend to hold the dentures in place, rather than to tip or upset them.

Over-hanging *cusps* in a majority of cases, while following nature, are often the source of mischief as the *lateral* action of the jaw causes the displacement of the plates.

STINK-HOLES.

This is not a very elegant title, but it is exceedingly expressive. It is plain English—any one can understand it; and that is just what I write for—to be understood—“high-falutin” has no place in a busy man’s vocabulary.

In grinding up gum-blocks too much material is taken off of the inner sides or edges, so that when the flask is opened, large triangular spaces are left between the two ends of the blocks and the plaster. Into these open spaces the rubber is forced in screwing down the flask. To prevent unsightly dark streaks from showing in the joints of the gums, some foreign substance, such as thread, plaster, or other thing, is introduced, before packing the case with rubber, which, in time, becomes washed out, leaving deep cavities for food and other things to lodge in, and become decomposed—these cavities of course are small, and for that reason are the harder to keep clean. The patient is much annoyed by the unclean tendency of her teeth, without knowing the real cause. Her friends observe the unpleasant odor from her breath and give her “room according to her strength.” Any wood-mechanic knows that a “glue-joint” cannot be made without considerable pains being taken to make the two surfaces fit and harmonize with each other throughout. So too, must the mechanical dentist take the greatest care to grind his blocks so the ends fit each other *throughout their whole surfaces*. No perishable article, or anything of a temporary nature should be introduced to hide a misfit. When the case is done no hole or interstice should be found. Better let the rubber fill all up solidly, even to the sacrifice of beauty. If we *must* pack with any thing, let us use gold foil, or some *durable substance*.

G. W. ADAMS.

Bristol, Pa.

FILLING ROOTS.

DR. J. GUTTMAN, GREAT FALLS, N. H.

It is seldom the apex of the canal can be reached properly through proximal caries. I drill an opening into the canal chamber directly over the mouth, not larger than the mouth itself, then with long and slender instruments I can go directly home. The only exceptions are the molars, whose roots can often be reached better laterally from the buccal side; then I make my opening somewhat elliptical.

The incisors and cuspids I approach from the palatal side, directly over the mouth of the canal. If I find devitalization is incomplete so that my approach causes pain, I take my hypodermic syringe, fill it with absolute alcohol, and inject into the root; sealing the crown, I make another appointment a week hence, when usually I can complete my operation without pain. It has been my practice, after thoroughly removing the pulp and cleansing and drying the chamber, to saturate the dentine with wood creosote, removing the surplus and filling the upper part, or about one-half of the root, with gold. Nothing has enabled me to do that part so well as gold, soft, unannealed but slightly warmed, introduced gently by *hand-pressure* only. And I stand here pleading for hand-pressure in manipulating root-fillings. I never use the mallet on a dead tooth. I attribute a great part of my success to this. The rest of the canal I fill with Hill's stopping, as I consider an entire metallic filling through root and crown bad practice. I would prefer Hill's stopping through the entire root, were it not for the uncertainty of having the root well filled and the possibility of forcing air through its foramen, which usually causes trouble.—

Archives.

DENTAL LAWS.

The following States require a diploma from a Dental College or a license from the State Dental Examining Board:

Alabama, California, Dakota, Delaware, Indiana, Iowa, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, New Hampshire, New York, North Carolina, Pennsylvania, South Carolina, Vermont, West Virginia, Wisconsin.

Georgia requires all dentists to have a license from the State Board of Examiners.

Illinois, Kansas, Missouri, and New Jersey require a diploma from all.

Treating Pulpless Teeth.—Dr. G. W. Smith says you can bore into the canal of a pulpless tooth, wash it with the peroxid of oxygin and fill permanently at once. He pursues this course regularly, and has not had a case of abscess resulting from it in the past year.

VIRGINIA DENTAL LAW.

Approved February 26, 1886.

1. Be it enacted by the General Assembly of Virginia, That from and after the passage of this act it shall be unlawful for any person, except regularly authorized physicians and surgeons, to engage in the practice of dentistry in the commonwealth of Virginia, or to receive license from any commissioner of the revenue, unless such person has graduated and received a diploma from the faculty of a reputable institution where this specialty is taught, and chartered under the authority of some one of the United States, or of a foreign government, acknowledged as such, or shall have obtained a certificate from a board of examiners duly appointed, and authorized by the provisions of this act to issue such certificates: provided, that nothing herein contained shall prevent any person from extracting teeth for any one suffering from toothache.
2. That the board of examiners shall consist of six practitioners of dentistry, who are of acknowledged ability in the profession. Said board shall be appointed by the Governor, who shall select from twelve candidates named by the Virginia State Dental Association at their next annual meeting, of whom two shall serve one year, two for two years, and two for three years, and to reside in different sections of the state; and each year thereafter two shall be appointed in the same manner from four nominees, to serve for three years, or till their successors are elected. All vacancies for unexpired terms shall be filled by the Governor from names furnished him by the board.
3. That it shall be the duty of this board:

First. To meet annually at the time and place of meeting of the Virginia State Dental Association, and at such other time and place as the said board shall agree on, to conduct the examination of applicants. They shall also meet for the same purpose at the call of any four members of said board, at such time and place as may be designated. Thirty days' notice must be given of the meetings, by advertising in at least two of the daily papers published in the commonwealth of Virginia.

Second. To grant a certificate of ability to practice dentistry, which certificate shall be signed by said board, and stamped with a suitable seal, to all applicants who undergo a satisfactory examination, and who received at least four affirmative votes.

Third. To keep a book in which shall be registered the names and qualifications of each, as far as practicable, of all persons who have been granted certificates of ability, to practice dentistry under the provisions of this act.

4. That the book so kept shall be a book of record, and tran-

scripts from it certified to by the officer who has it in keeping, with the seal of said board of examiners, shall be evidence in any court of this commonwealth.

5. That four members of this board shall constitute a quorum for the transaction of business; and should a quorum not be present on any day appointed for their meeting, those present may adjourn from time to time till a quorum is present.

6. That any person who shall, in violation of this act, practice dentistry in the commonwealth of Virginia, shall be liable to indictment in the circuit, county or corporation courts; and on conviction, shall be fined not less than fifty nor more than two hundred dollars: provided, that any person so convicted shall not be entitled to any fee for services rendered; and if a fee shall have been paid, the patient, or his or her heirs, may recover the same as debts of like amount are now recovered by law.

7. That all fines collected shall inure to the public school fund of the county or corporation in which the prosecution occurs.

8. That nothing in this act shall apply to persons who shall be engaged in the practice of dentistry in this commonwealth at the time of or prior to the passage of this act.

9. To provide a fund to carry out the provisions of the third section of this act, it shall be the duty of said board of examiners to collect from those who shall appear before them for examination the sum of ten dollars each.

10. This act shall be in force from its passage.

Heat of Rubber Plates.—Extracting Teeth for plates.
Dr. Wm. H. Morgan wishes to notice two fundamental errors. The damage done the mouth by rubber is attributed to excessive heat. This is a mistake. The mucous membrane does not eliminate heat; it cannot get above blood-heat, unless there is inflammation; it cannot eliminate enough heat to raise the temperature of the mouth above that of the body. The idea of abnormal heat is a wrong impression. There is always irritation and inflammation preceding abnormal heat. We must go back of that for the production of loose tissues in the front of the mouth. Again, it is said all the natural teeth should be removed that would interfere with the artificial denture. The contrary should be the rule. The comfort and utility of the natural teeth should be considered, and the plate made to conform to them.

For enamel erosion, Dr. W. H. Dwinelle, of New York, finds the best remedy to be cutting away the roughened surface and then thoroughly polishing.

CHRONIC ALVEOLAR ABSCESS.

W. S. ELLIOTT, D. D. S., M. D., NEW YORK.

In incidents of daily practice tell too often how far short of desire are our attempts to mitigate the sufferings of the patient. And perhaps in no other department are we more humiliatingly confronted with our inability than when we assay to avert the issue or stay the progress of degeneration of the apical periodontal membrane when under pathological influence.

Congestion or moderate inflammatory conditions, it is true, yield with variable kindness to treatment ordinarily adopted, but it is not encouraging when the most careful and seemingly thorough manipulation and medication of the pulp canal and tooth environment fail to remove the discomfort daily experienced.

My thoughts are directed to an inferior sixth year molar, which, after several weeks' nursing, I was obliged to extract, accompanied in the act with an inward prayer that some higher intelligence might vouchsafe the knowledge and ability to guide similar cases to a satisfactory consummation. An autopsy was held; a fibrinous thickening of the apical membrane demonstrated. I could not have positively known this, as the symptoms were not sufficiently pronounced; and if it had been deemed probable, I could have only guessed which root was specially involved. Both canals were clean and aseptic, and both were well filled to within a line of the apices. The patient was a gentleman of vigor—the alveolar process heavy and dense, precluding any idea of inserting a drill, especially in the absence of a satisfactory diagnosis. Would you say the canals ought to have been opened through to the foramina? Any further drilling, as the autopsy showed, would have missed the foramen and have made an exit above the apex and externally to the sack; the other root was favorably shaped, but here there was no serious complication.

Are these possibilities not yet attained in the treatment of these cases? or will some savan of our profession lift on high the lamp of his knowledge and guide us through the mazes of non-understanding to the goal of our desires?

Maryland Dental Law. Dr. T. B. WELCH, Ed. ITEMS OF INTEREST: In April number of ITEMS OF INTEREST under title of "Maryland Dental Law," you refer to one provision which you style "selfish," that of subjecting graduates of colleges in other States to an examination. I am happy to inform you that on last Friday an amendment *completely correcting* this unjust feature of our dental law was passed by both branches of our State Legislature, and that our law is now a just and liberal one.

F. J. S. GORGAS.

SHALL HE EXTRACT?

Editor ITEMS: Yes. Let me give you a similar instance to this of P. R. Welch, and my mode of treatment and the results. In summer of 1884, I was sent for in haste, by one of my patients. I found her little girl, three years old, suffering terribly. She had fallen and, as her mother said, knockt out her left superior central incisor the day before. The family physician had been called in, and had treated the case to the best of his ability; but on calling the next morning he found her mouth in such an alarming condition that he advised sending for me. I found her lip, nose, and gums very much swollen and highly inflamed. The right central was very loose and twisted out of position, and the left central was absent. With a small probe I pushed up into the socket of the missing tooth and could distinctly feel the cutting edge of the incisor. Inserting my little finger into the left nostril I felt the end of its root which had been nearly driven through into it. With the end of my little finger I gradually but firmly pushed the tooth down till the cutting edge could be reached with proper forceps and then I extracted the tooth. The right central, though loose, the alveolus was but slightly fractured. I twisted this into position and treated the mouth for a few days, when all was well. When the proper age arrived the left permanent central promptly made its appearance, took its proper position and developed into a perfect tooth. But the right temporal central showed no indications of shedding. After waiting for several months I felt the permanent central through the gums. I extracted the temporal central and found no absorption at the root. The nerve was dead. In a few weeks the permanent central made its appearance, took its proper position and developed into as perfect a tooth as the left central.

HENRY G. MORGAN.

Allendale, S. C.

Imagination.—Dr. J. B. Hodgkin of Baltimore tells of a lady, for whom he had made a set of teeth, who, returning to his office declared she could not wear the teeth at all. He made a careful examination of the mouth, articulation, fit of plate, etc. He then carried the plate into the laboratory and after studying the case carefully, decided, before making any alteration, to have her wear them longer. He replaced the teeth in her mouth, and before he had time to explain, she exclaimed, “Oh my! that is ever so much better: I don’t think I shall have any further trouble with them.” She went away perfectly satisfied, and remained so.

Kingston, Ont.

R. E. SPARKS.

PULPLESS TEETH.

FRANK ABBOTT, NEW YORK, IN THE FIRST DISTRICT SOCIETY, OF N. Y.

No operations in the practice of our specialty are attended with greater anxiety, or requires a more thorough knowledge of remedial agents, than in the treatment of pulpless teeth; but as every dentist has his own particular ideas and methods when treating such teeth, I will simply give my views, and state my methods. The treatment of pulpless deciduous teeth, are attended with uncertainty, because, by the time the decay extends to their pulps, the roots become absorbed, and their jagged edges produce constant irritation. The first step in treatment of these (and all pulpless teeth) is to thoroughly cleanse them from the dead pulp, using warm salt water with alcohol, a weak solution of carbolic acid in water, listerine diluted with water, or any other non-irritant of a similar nature. When a deodorizer is required, I suggest permanganate of potash, three grains to one ounce of water. After this, force a spray of some germ-destroying antiseptic into the cavity. Then drill a small opening through the side of the tooth, to enter beneath the edge of the gum and extend to the pulp chamber, for a permanent vent. A thin platina cap is fitted to the bottom of the cavity, and over this a filling is placed. The opening drilled through should be kept clear. I would not attempt to fill root canals of deciduous teeth, fearing that such fillings would keep up constant irritation to the surrounding tissue. The opening from the pulp-chamber gives exit to any possible exudation, and also affords an opportunity for cleansing or medicating if needed. Where such treatment is followed, swollen face will be avoided.

Pulpless permanent teeth should be well cleansed. Some of the roots of these teeth are so tortuous and contracted as to render the entire removal of dead pulps an impossibility. The successful treatment of these depends much on the condition, whether septic or anti-septic, of whatever portions of the pulp may be left. Do not drill for enlarging pulp canals, as they are apt to pierce through to the alveolus. After cleansing as thoroughly as conditions permit, use the same remedial agents as for deciduous teeth, or a $\frac{1}{2000}$ solution of bi-chlorid of mercury. Then a pellet of medicated cotton is packed into the cavity and sealed with gutta-percha and wax. This is removed in two or three days and the spraying and antiseptic repeated, and kept up at like intervals for about a fortnight. If no trouble has then occurred, a small piece of cotton is carried to the end of the root and packed lightly, and covered with a soft paste of oxy-chlorid of zinc. This is done where roots are entirely pulpless, but where any portion of a pulp remains, a small pellet of cotton is saturated with a mixture of oxy-chlorid of zinc and placed loosely in the root. This is covered

with gutta-percha gently pressed against it, which forces the zinc paste into every part. If pain is caused, the pressure must be stopped at once and the pain allowed to subside. When comfortable, the gutta-percha is removed and a filling introduced to complete the operation.

Where the pulp is living, it should be carefully treated and capped, but if dead should be treated as described.

Where an abscess is discharging through a fistulous opening in the gum, the tooth should be cleansed and a solution of chlor. zinc, 40 grains to 1 ounce water, forced into the root canals till it works through the fistula; then the canals are filled with oxy-chlorid of zinc. This can be done at one sitting, because the antiseptics have had their effect and the chlorid of zinc readily destroys the pyogenic membrane which forms the pus sac. Granulation will follow, and the irritation that any subsequent operation might cause is avoided. After operations on dead teeth the gums round them should be painted with a mixture of equal parts of tincture aconit and iodin, except in abscess, to prevent or relieve pericementitis.

If the tooth and roots are filled and the pain and swelling cannot be relieved by such applications, a hot raisin can be applied. A plump raisin split open, and the seeds removed, should be dipped in hot water and placed fruit side against the gum. This can be repeated every half hour for several hours, and one left there over night. The relief this gives is, in some instances, beyond comprehension.—*Independent Practitioner.*

The third annual meeting of the National Association of Dental Faculties will be held at Niagara Falls, Wednesday, August 4th, at 3 P. M.

C. N. PIERCE, President.

H. A. Smith, Secretary.

To stop bleeding after extracting, I fill the cavities with tannin made into a thick paste with glycerine. Over this I place warm gutta percha to be bitten down on and kept close.

FRED. W. WELCH,

Syracuse, N. Y.

We Hate the Term "Pulpitis."—On the principles of etymology it has no right to exist; and nothing analogous occurs in our language. It is not suggestive of scholarship, but the reverse. *Gastritis* means inflammation of the stomach, but how would any one enjoy hearing it called *stomachitis*? To correspond with the vulgar term above, "*stomatitis*" would have to change to *mouthitis*.—Geo. Watt.

HISTORICAL REMINISCENCES

C. S. CHITTENDEN, D. D. S., L. D. S., HAMILTON, ONT.

[Read before a Union Meeting of the Seventh and Eighth District Dental Societies of New York. Published by the *Independent Practitioner*.

Fifty years ago, as I was walking down St. Paul Street, Burlington, Vermont, with my father, I read, on a door-plate, "O. H. Saxton, Dentist." I asked what the word "dentist" meant, when my father replied: "It means a man who treats people's teeth. It is a very lucrative business, I understand," and this led me to inquire further, as to the meaning of the word lucrative.

I was then ten years of age, and had never heard of a dentist. Two years later, in 1837, I came west to visit my older brothers, one of whom, Dr. Nelson Chittenden, then of Nunda, N. Y., I found to be a dentist. I saw him cut up calves' teeth, for insertion in the mouths of his patients. I well remember how ghastly the calves' jaws looked to me. He also carved teeth from the hippopotamus tusk, and fastened them in the mouth with gold wires passing through the artificial teeth and around the natural ones, and thus they were tolerably well fixed in the mouth. I remember his showing my father some mineral teeth, which he thought might possibly supplant those made from the teeth of animals. Nine more years passed, and I was again with my brother. I was then twenty-one years old, and was starting out in life. My brother, who was nineteen years my senior, advised me to study dentistry. I accepted his advice, and commenced.

I say "study" dentistry, but there was really so little to study that, practically, it meant watching him in the operating-room and the laboratory, and receiving his oral instructions. Thirty-nine years have passed since then, during which I have heard many lectures, read many volumes, attended many dental meetings, where I have heard the best dentists in the country describe their operations, but I have seen or heard of few who performed in the mouth or in the laboratory more conscientiously or successfully than he. If he were not certain of success he refused to act. The only book he had for me to study was Harris' Practice, then about one-fourth its present size. He was anxious to keep abreast of the times, but there was very little to keep abreast of, as we look at the profession now. He had a set of forceps made, I think, by Bushnell, of Rochester, which were certainly strong. I once asked him why he never used these forceps for extracting, when he told me that unless the teeth were very strong and solid the forceps would crush them. The turnkey was his favorite, and he certainly could use it most effectually. He could extract with it any tooth that could be extracted at all.

I was taught never to use amalgam, and did not till I had been in

practice many years. Gold and tin foils were the only materials employed at that time, so far as I know, for filling teeth. These were rolled into ropes, one end turned on itself, forced into a retaining point and fixed. Then another loop or turn on itself was forced down beside the first, and so on till the cavity was filled, when the whole surface would be condensed, smoothed and burnished. I doubt if I could make a good filling in that way now, but I did then, and many of the fillings of those days preserved the teeth as effectually as our more scientifically inserted ones do now. A half-dozen cherry headed drills, as many hatchet-shaped excavators, three or four incisor and as many molar files, with a half-dozen queer-shaped filling instruments, completed the outfit for the operative department. No napkins were needed, as while it was considered rather desirable, it was not thought necessary to keep a cavity dry while filling. I remember hearing Dr. Wescott, of Syracuse, say that he had frequently seen the late Dr. C. A. Harris fill teeth without the slightest attempt to exclude the saliva.

In the mechanical department the first requisite was a pair of rollers, or, as our English friends call them, "flatters," three or four impression cups (for wax only), with a plate-punch, one or two pairs of pliers for holding gold while filling, a pair of scissors, with lead and tin for swages, and the office was complete. A lathe was a superfluity in those days. A small grinding-stone (such as is used for sharpening knives) sufficed for grinding teeth, the polishing of plates being done by hand, with pencils and sticks dipped in oil and emery. The fee for an upper or lower set of teeth on gold was fifty dollars; on silver, half that sum. So far as I can remember, the above were the fees among all the dentists for mechanical work. For filling with gold, seventy-five cents; tin or amalgam, thirty-seven and a half cents. I have no doubt that much higher fees were charged in large towns, but I am not certain.

There was but one dental college in the world at that time, The Baltimore, and but one dental paper, *The American Journal of Dental Science*. This was published regularly. Dr. E. Parmly published a paper which, so far as I can remember, was issued "from occasionally to semi-occasionally." I think it was called *The Dental Intelligencer*. I have before me the first number of the *New Dental Recorder*, dated Sept 1st, 1846. There is no name attached to it as editor or publisher, but I think Dr. C. C. Allen acted as editor, for I find his name as such in subsequent numbers. It can easily be imagined how eagerly I devoured each number as it appeared, and with what delight I read "Maury's Dental Surgery," and another by Paul B. Goddard, which I had obtained before the end of 1847. When I look over these old journals and see such names as Geo. E. Hawes, J. F. B. Flagg, Amos

Westcott, W. H. Dwinelle, John Burdell, E. Parmly, E. Townsend, James Taylor, C. A. Harris, J. D. White, John Allen, E. J. Dunning, Robt. Arthur, S. P. Miller, P. B. Goddard, T. L. Buckingham, and a host of others, I feel that I am in the sere and yellow leaf. All these men did good work, not only for their patients, but for us who are alive and remain. "There were giants in those days."

On the first of September, 1847, *The Dental News Letter*, published by Jones & White, appeared. It was a newsy, spicy journal, and reads well even now. It was continued through twelve volumes, when it was succeeded by *The Dental Cosmos*, in 1859. In 1847, our old friends, Drs. Taft and Watt, commenced *The Dental Register* (I am not quite certain that Messrs. Taft and Watt were the original editors). This journal has always done most useful work. I am delighted to know that both of these gentlemen are still in the flesh, but sorry to hear that Dr. Watt is disabled from active duty.—*To be Continued.*

HYDRONAPHTHOL.—A NEW ANTISEPTIC.

DR. G. R. FOWLER, NEW YORK.

Hydronaphthol is a derivative of the hydroxyl substitute of naphthalin; the latter of itself possesses antiseptic properties of sufficient value to have already excited notice and a desire to learn more of its compounds. The term "hydronaphthol," though perhaps not, strictly speaking, correct, yet conveys sufficiently well its character and relations to naphthalin, and is a convenient term for every-day use. It has been but recently discovered that it possesses antiseptic properties, and the claim is made that it is from ten to fifteen times more efficacious than carbolic acid. It is the most prominent antiseptic of the phenol series, and, besides, possesses so many other advantages over substances now used for this purpose that it bids fair to supersede many. In surgical practice it will take the place, probably, of carbolic acid. Of the many new members of the phenol series which have been discovered since Calvert called attention to carbolic acid about thirty years ago, and which have been utilized in the industrial arts, some are better antiseptics than carbolic acid. With one or two exceptions, however, none have obtained any prominence as germicidal agents. Carbolic acid, though a fairly reliable antiseptic in strong solutions, when so used, involves some risk to life, from its corrosive action on animal tissues and well-known poisonous properties. In weak solutions it is exceedingly unreliable, and its disagreeable odor often hides putrefaction, instead of preventing its occurrence. On the other hand,

hydronaphthol is non-irritant, non-poisonous, and non-corrosive; and, though only soluble in water to the extent of one part in one thousand, in this proportion it is antiseptic. It has no odor to disguise putrefaction, nor is it decomposed nor rendered inert by the products of putrefactive decomposition—such as sulphureted hydrogen and ammonia. It is far more stable than carbolic acid, not being volatile at ordinary temperature. Its vapor, when volatilized for purposes of fumigation, has no obnoxious effect on the organs of respiration. It will not injure, either in substance, solution, or vapor, colors or textile fabrics. Its sparing solubility in water is rather an advantage, as mistakes in making solutions can not occur. A saturated solution is about one to one thousand, and in this proportion it will perfectly preserve for an indefinite time animal tissues and fluids, and yet on living tissues this solution produces no perceptible effect other than the formation of a very slight albuminate film—this latter to be considered rather an advantage than otherwise, inasmuch as it constitutes an additional security against infectious germs floating in the air. If for no other reason than that it is non-corrosive, and hence will not injure the polished surface and keen edge of cutting instruments, it is to be preferred to mercuric bichlorid, and to the latter it is second only in antiseptic qualities. It has a slight aromatic taste and odor, and crystallizes in scales like clinorhomboïd lamine of a silvery white or grayish hue. Though but sparingly soluble in water, it dissolves freely in alcohol, ether, chloroform, glycerin, benzole, and the fixed oils. It is not volatile at ordinary temperatures, but begins to sublime at about 90° C. With the alkalies and the alkalin earth it forms compounds which are unstable, are readily decomposed by carbonic acid, and of doubtful antiseptic value. It is easily powdered, and in this condition, triturated with carbonate of magnesia, silicates, such as fuller's earth and China clay, in the proportion of two parts of the hydronaphthol to one hundred of either of these, can be dusted along the line of incision and over the mouths of drainage tubes, having an advantage over iodoform, now so commonly used for that purpose; also it does not dry the serum escaping from the wound cavity, and thus block the exit extremity of the tube. Absorbent gauze, cotton, jute, wood-flour, sawdust, peat, moss, and paper-wool may be impregnated with it by immersing them in its alcoholic or benzole solution and then drying; the hydronaphthol crystals cling to these without the aid of stearin, paraffin, or rosin, an advantage over carbolic acid. As it is not decomposed by the presence of organic matter, it possesses this advantage over corrosive sublimate in the preparation of surgical dressings. Its ten per cent alcoholic solution perfectly sterilizes silk, and sufficiently hardens and preserves, as well as sterilizes catgut.

EXTRACTING THIRD MOLARS.

A. BERRY, D.D.S., CINCINNATI, O.

[Read before the Ohio State Dental Society.]

The question of the proper treatment of impacted third molars, is often of grave importance. A patient complains of trouble in the region of an lower third molar, often slightly elevated above the alveolus, and nearly or quite covered by the gum, which is highly inflamed, exceedingly sensitive, and painful.

In many cases, when the annoyance is recent from a third molar being erupted at about the usual period, and firmly imbedded, indicating difficulty in its removal, if section of the gums and local treatment fail, it is well to extract the second molar, when the swelling and pain will usually soon cease, and the third molar take the place of the second. When the trouble has been of long standing, rendering it probable that the advance of the third molar has been permanently stopped, the necessity of its removal is clearly indicated. Now, serious fears may confront the operator. Insuperable difficulty, or want of fortitude in the patient, may cause failure in an effort to extract the tooth. Vivid recollections of trouble in similar instances, as well as the possible Herculean task, present themselves in fearful array to the mind of the operator. He recollects that an able dentist of long and large experience, after great annoyance, was mulcted by verdict of a jury of several thousands of dollars, as the result of an attempt to extract a third inferior molar under exceedingly difficult conditions.

But he has no way of escape. He cannot, like the neighborhood tooth-puller, say to the patient: "The roots of this tooth are hooked under the jaw bone, and it cannot be pulled without breaking the jaw." He belongs to the Esculapian family. His work is to prevent or alleviate human suffering; and he must do something to afford relief to his patient. He must remove the tooth or make a failure. He prepares the patient for the ordeal as he thinks best, telling him, perhaps, that the roots of the tooth may be crooked, causing difficulty in elevating it, and that with a poor chance to apply force, the operation may be tedious as well as painful; but encourages him with the prospect of relief.

With his Physick's hawks-bill, and several small beaked forceps and elevators of various forms and sizes, and an anesthetic for local application, the dentist is ready for action. After careful examination to decide as to the best manner of applying force, he commences with, perhaps, a small elevator deeply inserted between the second and third molars, and makes an effort to loosen and raise the offending tooth. If he succeeds and can grasp it with forceps and extract it,

even after prolonged effort, he has reason for congratulating his patient as well as himself. But in some cases if he attains this result after a half hour of persistent effort, causing intense suffering, he may consider it a fortunate ending of the dreaded ordeal.

After giving suitable directions, and charging a fee considerably larger than for ordinary tooth-drawing, he dismisses the patient. For all this severe mental and physical effort, the principal reward of the dentist is the consciousness of having done his duty. But his trouble does not always end here. Severe inflammation and pain may follow, requiring further treatment, and convalescence may be so tardy as not to be agreeable to the operator nor satisfactory to the patient.

Most persons, fortunately for them, suppose that all teeth can be extracted readily; not knowing the difficulties in some instances with third lower molars. As every one considers himself a competent judge, the dentist may bless his stars if the patient and all his friends do not make the neighborhood lively with tales of his awkwardness in being so tedious and causing such severe suffering in extracting a tooth.—*Ohio State Journal*.

To make a New Plate Adhere.—Mr. D. Hepburn, says: All must have experienced the difficulty frequently met in establishing the confidence of patients in suction plates, especially when first applied. Even with the most perfect model, the most accurately adjusted arrangement will often at first show no tendency to adhere, and the patient may have to undergo many days of discomfort before adhesion is established. For about a year, I have employed powdered gum tragacanth with the most satisfactory results. Indeed, the most refractory plates, when this substance is used, adheres with tenacity. The best method of application is to keep the powder in a bottle with a piece of muslin tied over the mouth, and to sprinkle the plate with a thick layer of the powder before putting it into the mouth. The saliva would in a short time convert the tragacanth into a glutinous, tasteless layer which would remain for days. In obstinate cases the patients can apply the powder daily.—*Dental Record*.

The Father of His Country's False Teeth.—The artificial teeth that are responsible for the peculiar expression seen in portraits of George Washington are in the Baltimore College of Dentistry. The lower plate is carved out of one piece of ivory, as near like a plaster cast of the mouth as possible, and the teeth, also of ivory, were riveted on. The upper plate split after it had been worn awhile, and the pieces were fastened together by two thin strips of iron riveted on the plate.

PULPLESS TEETH.

I. P. WILSON, D. D. S., BURLINGTON.

A pulpless tooth is not necessarily a dead tooth, but a dead tooth is, of course, a pulpless tooth. The adjectives "pulpless" and "dead" are not synonymous, though frequently so used, specially by medical writers. Let us note the marked distinction between the two. A pulpless tooth may be a part of the living organism—a dead tooth has its nutritive supply entirely cut off, and it is in every sense a foreign body—it is dead. The former may be restored to health and usefulness—the latter should always be condemned as a nuisance that cannot be abated without the use of the forceps.

Let us briefly notice the sources from which the dentine and cement derive their vitality, and we shall understand the distinction. The dentine is formed and sustained by the dental pulp which throws out its tributaries into every part of that substance, feeding and maturing it, till (in old age), the pulp and its fibrils become obliterated. The cement which surrounds the roots of teeth, is formed by and belongs to the aveolo-dental membrane. That there is feeble communication between the dentine and cement, may not, perhaps, be questioned, but the living plasma circulating between the two must necessarily be limited, otherwise the devitalizing effect of arsenic would not end at the periphery of the dentine. As the dentine lives only as it draws its life supply from the pulp, so the cementum lives only as it is sustained by the root membrane. It follows then that the death of the pulp and the dentine, by no means imply the death of the cementum, and as the alveolo-dental membrane is the bond of union between the tooth and its socket, and as this membrane sends its living plasma into the cementum it embraces, it follows that a living pulp is not essential to the health and preservation of a fully developed tooth. We have additional proof of this in nature's method of obliterating this organ as old age comes creeping on, and its function has been performed. The pulp and its fibrils do not die and decompose in the canals and tubes when the work of developing the dentine has been completed, but little by little they recede, filling the tubes and canals with lime salts as they retire, till the work of replacing the pulp and its fibrils with hard tissue has been completed. The more nearly we resemble nature in perfectly filling the canals with imperishable material, leaving no soft tissues to decompose, the more successful will we be in our treatment of pulpless teeth. We cannot fill these tubes, but we can embalm their fibrils—seal and preserve them in purity.

The best treatment for the preservation of the teeth is cleanliness of the mouth.

SOME THOUGHTS AND EXPERIMENTS ON EROSION.

EDGAR D. SWAIN, D.D.S., CHICAGO, ILL.

In the literature of our profession we find the terms Denudation, Abrasion, Mechanical Abrasion, Chemical Abrasion, Spontaneous Abrasion, and Erosion employed to convey two conditions, which could better be expressed by the two terms Mechanical Abrasion and Erosion. Mechanical Abrasion is a gradual loss of tooth substance, produced by the attrition of the teeth, or of foreign bodies on them. Erosion signifies the action of a corrosive substance, the destruction of a part of a tooth by a chemical agent, and applies equally well if the theory of destruction by micrococci be admitted.

Mechanical abrasion is of so frequent occurrence, and the methods used by our profession to arrest it are so well understood, that I pass it with the simple recognition that it is successfully arrested by the methods adopted.

Erosion, we assume, covers all those conditions with which we are no less familiar, but the causes of which are less patent. Under this head we find the gradual wasting of a tooth, or of many teeth, the wasting of the anterior teeth on their incisive edges, or the cutting of grooves across their labial surfaces, and sometimes regular and irregular patches on their labial and proximal surfaces.

Under the first condition the anterior teeth generally present an elliptic-shaped space between the upper and lower incisors, when the back teeth are closed. In these cases the destruction can not be attributed to mechanical forces, because the teeth can no longer be brought into contact. It can only be accounted for either by the theory of insufficient nutrition, the subsequent death of animal tissue and consequent falling to pieces of the mineral portion, or its destruction by some corrosive substance.

We need no theory to better account for this kind of destruction than a deranged nutrition.

I have never, with teeth affected by this disease, been able to determine with the microscope that the terminal ends of the tubes were filled with calcific material, or a deposit of any kind. Indeed, great difficulty is experienced in preparing specimens from such teeth for examination, because of the tendency to crumble, showing a deficiency of the animal tissue. Such an attempt to resist the approach of destruction toward the pulp would not be consistent with defective nutrition.

Teeth thus affected are never sensitive on the eroded surface, and very seldom does the pulp become exposed; it recedes and deposits secondary dentine, in amount about equal to the external waste in depth.

That feature of this disease which affects the labial surfaces of the anterior teeth, horizontally, about or just below the union of enamel and cement, resulting in a groove or patch, with none of the characteristics of caries, no softening of the dentine, the entire groove presenting sharply defined edges and a highly polished surface, precludes even a possibility of mechanical causes.

Teeth affected in this manner do not seem to be subject to caries, but usually have the appearance of a perfect development, clean and well-polished enamel.—*Independent Practitioner.*

Dr. Abbott's Spray Instrument for applying medicaments. By this, fluids can be thrown wherever desired, as back of the soft palate, up into the posterior nares, etc. In abscess of the antrum, remedies can be applied directly to every point of the cavity; in hypertrophy, there are layers in the mucous membrane discharging pus. These should all be cleansed; the syringe can only wash the surface, while this instrument will carry it in every direction at the same time, filling the cavity full. Dr. Farrar has invented a syringe with similar points, but this was a more simple and more certain way of applying remedies, as the spray had intense force. In using remedies that were liable to crystallize, as the boracic acid of listerine, water must be drawn through after each application, for cleansing. The instrument is not confined to the use of listerine. Any liquid can be used. It has sixty pounds' pressure, and is invaluable for the treatment of diseases of the antrum. It is valuable for blowing chips from the cavity, as it gives a continuous stream of air; it is also excellent for local anesthetizing the tooth being rendered insensible to pain in a moment.—*Independent Practitioner.*

Chemical doctors are a failure the world over. It requires something more than bricks and mortar to build a house. Vitality, the great architect which dominates the whole process, will not take the materials ready made, but must prepare them in her laboratory—the human system—specially for each case. All we have to do is to furnish the material in the food. In anything like a normal condition the appetite craves just what is needed to build tissue. Pregnancy is in one sense an abnormal condition; yet we should allow the utmost possible limit to the appetite of the expectant mother. The diet must not consist of wholly farinaceous food. Those articles must be taken, from which can be assimilated such principles as are needed to supply the imperative wants of the fetus, that in its famishing condition it may not prey on and rob the system of the mother.—*W. C. Barrett.*

ART IN DENTISTRY.

DR. W. A. CURRIE, BOSTON.

Note the general expression, the fulness of the lips, and the tooth development beneath them. Watch where and how the light strikes the face, and what is the result of different lights on the same features. If any teeth are absent, note the effect on the expression. Observe color of hair, eyes, and complexion, and then examine the exact shade of the teeth, the size and shape of the teeth as compared with size and shape of features, form of head and general build of body. This can be done by a trained eye, while the patient undergoes the usual examination without suspecting that your attention is given to more than the teeth. Then compare this with the next face that presents itself. This observation and comparision must be critical. We are too apt to bestow a casual glance, and forget as soon as the patient is gone, instead of memorizing and making a note of the most important points.

To make ourselves *masters* of the art of light and shade, we must go even further than this. *We must cultivate a taste for art.* We subscribe for some of the dental journals—why not for an art journals also? We try to keep ourselves informed on all the new ideas in our profession—why not mix a little art with them? Suppose we cannot see at first that it is benefiting our work, it is refining, and affords a pleasant change from an occupation in many respects disagreeable. Then, when we have leisure we can turn our hands to a little modeling.

If we have a small space in our laboratories, why not utilize it by making a bench in a corner that has a good light, and invest in a few pounds of artists' clay and one or two modelling tools. By an hour's work a day, and the outlay of a few dollars, and we have a way of passing our spare moments that will be novel and instructive. For it is in modelling and casting that the effect of light and shade is made most manifest. If we have doubts of our ability to reap benefit from modelling, why not try casting, choosing a friend or a patient's face for a subject? Suppose we try it in this way, our subject being a person who wears a full denture and with a bare face? First make a mold of the face (wax will answer) with the mouth empty. Now one with the plate in position, then, after building up with wax in different places on the plate, place them in the mouth and make a third mold. Now to cast with plaster. The wax mold will of necessity be thin, so that it is best before casting to build round the outside of the mold with sand so that the weight of the plaster, when soft, will not change the shape. Then if you will tint the water with powdered or dry umber and a little vermillion before you mix the plaster, the latter will more nearly resemble the flesh-color. After casting all three, and allowing the plaster to set, if you will remove the wax from each you will

be surprised at the entirely different expression on each face. The question is, where you will find a person who will submit to so much trifling? I have experimented with many different faces, and thus far they have been so deeply interested in the novelty of the work that I have yet to meet the first complaint. I believe, if dental practitioners who have never tried this, would do so, they would be surprised and pleased with its effect on their laboratory work. At first, I became discouraged, and thought I failed more often than I succeeded; but now, when I look back I find I have not failed. I have succeeded so far that now I am where I can see what can be accomplished if one is perseverant. I am convinced the study of facial expression has helped me wonderfully, and has given a new impetus to work that before seemed monotonous. One thing in which I think all will agree with me is that a little art cannot injure us, even if it is esthetic.—*Journal Am. Med. Asso.*

"A New Method of Flasking Vulcanite Rubber Work."

—This is a method, Dr. Wm. H Trueman says, which offers advantages in cleanliness, saving of time, and safety of teeth, especially in difficult partial cases. By the original English method the work was invested in soap-stone. Dr. J. Speyer, of Philadelphia, has modified the method, using the patented "Surface Cohesion Forms," a prepared tin foil, similar to that used for stipple-work, or for securing a clean, bright palatal surface. The forms are embossed with geometrical figures, which leaves a network of continuous channels, instead of a central suction cavity. This gives firmer adhesion, causes less irritation to the mucous surface, and allows a much smaller plate; even if the plate tilts the suction is not entirely lost. The portion of the model to be covered with the form is thickly painted with a cement made of vulcanizable rubber dissolved in chloroform to the thickness of a heavy syrup, the foil being pressed down till all the indentations are filled with the cement, which prevents crushing out of shape in packing. Rubber softened in hot water is used in mounting the teeth, instead of wax or gutta-percha base plates, small bits of softened rubber and the cement being packed in around the teeth and pins. The rubber is built up to the proper size and shape, and finished as wax is generally used. It is then invested in plaster, without allowance for opening the flask, as there is no wax to be removed, and the cover screwed down before the plaster sets, when it is ready for the vulcanizer. While time and labor are saved, and cleanliness insured, the method has the great disadvantage of not allowing of trial in the mouth till finished.

The rubber dissolved in chloroform forms a cement which is valuable for many purposes, as for repairing bulbs of syringes.—*Independent Practitioner.*

ALVEOLAR ABSCESS AND TREATMENT OF DEAD TEETH.

DR. H. H. HARRISON, CADIZ, O.

[Written for the Ohio State Dental Society.]

Abscess in any part of the body is the result of inflammation. The cause is generally plain. We have inflammation of the nerve pulp of a tooth, caused by exposure to foreign substances, by thermal changes or by accident, aggravated perhaps by an enfeebled or depraved condition of the general system. This, of course, produces periosteal inflammation, but may not result in abscess. But a continued inflammation produces death of the nerve, as it does in any other tissue of the body. After death comes decomposition; nature in reducing the once living structure to its original elements, accomplishes its work by division and subdivision. In this chemical laboratory are manufactured poisonous gases inimical to vital tissue, which requires more space than the living nerve, they find their exit at the most vulnerable point of this bony enclosure, the apical foramen of the root. As they pass through the apical opening they come in contact with and poison the living tissue, producing inflammation of the surrounding parts. Nature, true to herself, throws round the diseased part, a cordon or sac to prevent further injury, and to carry away the wasting elements. This is the true alveolar abscess that gives us much trouble and our patients much pain.

Taking this as the correct theory of alveolar abscess, we advance to the treatment of dead teeth preparatory to filling. If the decomposition of the animal tissue results in inflammation and abscess, then the removal of the dead pulp, before abscess has been established, will prevent its formation. We can be confident that the pulp cavity being thoroughly filled with an incorruptible and healthful material, we shall never have abscess in a tooth.

In this preparatory treatment of dead roots we ought to rely more on the instrument for cleaning than on medicine. Nerve broaches, drills and excavators are better disinfectants than any medicine you will find, and in four-fifths of the cases presented you can fill at first sitting as well as treat with medicines for a month and then fill. Indeed I am almost ready to say that I cannot conceive a case in which success is dependent on treatment with disinfectants, for if you cannot penetrate with an instrument, the filling operation is only an experiment, and could be made no more certain by a disinfecting treatment. 'Tis true, it might be a benefit for a brief period by neutralizing the poisonous material within the cavity, but its effect would soon pass, and as soon as the cavity is filled with fluid, subject to decomposition, trouble would ensue. Hence, I seldom use disinfectants, but fill as soon as cleansed with the instruments, relieving my

patients of frequent sittings, and keeping my business under better command. A short time since I saw a case where a lateral incisor had been treated with disinfectants for two years, the tooth quite black, and no attempt had been made to fill; and I don't know when it is to be filled—possibly not till the millennium sets in. This by a reputable operator. Every operator chooses his own plan and selects his own material in filling, and I care little about this if he makes it a success, for I think success is not dependent on any one man's pet plan of operating. Of course, some plans are more practical than others, and we should all strive to be practical. But the principle involved is certainly to make a filling of incorruptible, healthful material, perfectly adapted to all the inequalities of the cavity made vacant by the removal of the nerve. This covers all the ground, and you can exercise your own individuality in accomplishing this end, and success will be yours and your patient will be happy.—*Ohio Journal.*

FATAL EFFECTS OF ALCOHOL.

According to Dr. Richardson, alcohol cuts down by disease in England and Wales alone, 1,000 persons a week. "What," adds the Doctor, "if any other cause of mortality did the same?"

What if 1,000 persons per week died, in the same area, from the bite of the rabid dog or the snake, by the swallowing of arsenic, opium or prussic acid? What if 1,000 persons per week were known to be killed by the secret devices of the slow poisoner, who, under the guise of friendship, went about and instilled into his victims some subtle drop which led to the shortening of their life and to the production of lingering organic fatal disease? What, indeed, then would be the cry and the action?

Why, all through the ranks of the great profession of medicine there would be a tumult of labor and toil, such as never before was seen, to remove the calamity. Men would be ambitious to be first to discover by experiment, by experience, the cause of so fearful an evil, and to remove it instantly; while he who won the victory over the calamity would be extolled as illustrious, and, crowned with honor, become a household word from among the children of Esculapius. Yet, here one single cause making this deadly havoc, a cause well known and easily removable, in spite of its evils and in face of its easy removal, is permitted to remain in sight with a majority of the army of medicine looking on in apathy, pitying us "poor foolish fanatics" who are exercising our limited powers to uproot it, and some, with the rest of the world, so sharing the calamity as to become co-partners in the destruction which follows from the participation.—*Scientific American.*

AN INTERNATIONAL DENTAL CONGRESS.

Dr. A. M. Dudley, gave at the last New England Dental Society, a full history of the London meeting of the International Medical Congress, which had a dental section, and spoke of the great interest connected with it. He recited, the facts connected with the endeavors made to have the Medical Congress meet in this country in 1887, and of what was done toward the organization of the Congress and especially the dental section ; of the subsequent troubles in the American Medical Association about the Congress and the action of the new committee in deciding not to have a dental section in the Congress of 1887. He then spoke of the action that was taken at the meeting in Minneapolis of the American Dental Association, looking to the possible organization of an International Dental Congress and of the late action of the committee of the American Medical Association in restoring the old organization of the Medical Congress and the re-establishing of the 19th section, on dentistry. He thought that there were still grave doubts, in consequence of the jealousies existing in the Medical Association, as to whether the proposed Medical Congress would come to this country in 1887, and if such should prove to be the case, stated that in all probability the American Dental Association would, at its next session, take the initiative in the organization of an International Dental Congress, and if they did, the New England Dental Society should be prepared to co-operate. If the American Dental Association did make a movement of this kind, in all probability the various dental organizations throughout the country would be invited to assist in the organization. He dwelt at length on the great benefit of such an international gathering of dentists from all parts of the world, and whether it came in the form of a dental section of the Medical Congress, or as an independent movement by the dentists alone, all dentists should be ready to do everything in their power to make it a grand success. He closed by expressing the desire that the New England Dental Society in electing its delegates to the next session of the American Dental Association should instruct them to represent this body in any action that might be taken with regard to the possible organization of an International Dental Congress.

Dr. Barker heartily approved of the suggestion, and hoped the New England Society would be in the foreground in any international gathering of dentists in this country, however organized.

Dr. Lewis thought this of great importance to the dental profession of America, and certainly the oldest dental organization in New England should evince a hearty support.

Dr. Dudley introduced the following resolution, which was unanimously adopted :

Resolved, That the propriety of the calling of an International Dental Congress, provided no Medical Congress with a successfully organized dental section is established, is unquestionable, and that if such a congress is organized in this country this body will pledge itself heartily in support of it.—*New England Transactions*.

Pulpless Teeth may not for sometime give trouble, but as soon as the pulp cavity is opened, trouble may begin. Does this come from the canal?—From the apex?—Or from the surroundings? When a tooth that has lost its pulp gives trouble, why is the pain at once relieved by opening the canal? Simply because the pressure is relieved by letting the retained gases escape. The gas must escape somewhere, and when there is no other outlet, it is forced by pressure through the foramen at the apex. As it is a result of putrefaction, it is an irritant; and understanding these things, we can appreciate the necessity of treatment. We can understand that time must be taken, and *care* also. The treatment does not depend on the medicinal agents, such as carbolic acid, peroxid of hydrogen, etc., but on the intelligent application and use of them. This is generally true of the treatment of all diseases. Now, as to leaving a deadened portion of dentine over the pulp, we must exercise skill and judgment. The dentine is softened,—tooth substance is lost, and the patient has called on us, and we must do something. We may get through all right, as we suppose, but the patient's trouble may come under the care of another dentist, when the abscess forms. Theory is pretty handsome, but it is the practical we want. The principles involved ought to be so well understood that when we perform any operation we may know we are doing good.—*H. T. McKellops*.

Taking Credit for Medicaments.—Because certain results take place while we are applying certain remedies, we are often apt to take credit for producing those results when they would have occurred without our interference. Here is a case where a split raisin does wonders, but would not the wonder have come to pass as readily without it?—

Within a few days a dentist was sent for to see a lady with a painfully swelled cheek, caused by a devitalized inferior molar. The tooth contained a large contour filling, and the patient informed him that the roots were also filled. The gum was also much swollen, and the tooth too sore to bear the slightest touch. He advised cold applications to be kept on her cheek, and half a roasted raisin to be placed against the gum. This at intervals was changed for fresh ones, and a saline cathartic administered. The inflammation soon became reduced, and a slight discharge of pus appeared through the gum. In two days the patient was well as before.

CAUSES OF CARIES.

DR. W. G. A. BONWILL, PHILADELPHIA.

My observations show that the predisposing cause of caries is principally the *physical law of capillary attraction*, where two adjoining proximal surfaces are in such contact as to form a capillary tube of the walls :

That caries attacks first the finest part of that tube immediately below the point of contact :

That the point of contact is never first involved :

That the active agent is starch or its products, and their chemical decomposition acting directly on lime salts :

That decay can be anticipated by timely action and judicious treatment : and, if not arrested early, will surely destroy the tooth-substance of seven-eighths of our children, and filling will have to be the result.

That decay, once commenced, it is of no consequence whether filled with compatible or incompatible materials ; it will not be arrested, unless this same law of *capillary force* is observed, and the proximal surfaces of the fillings and teeth are modeled as I do in anticipation :

That gold, *per se*, will protect dentos from future attacks of caries, if placed in teeth which are best adapted by situation, size of decay, and general surroundings, so as to enable an expert in its use to have access to the cavity, and the physical law laid down is observed, otherwise, it will fail :

That amalgam and other plastic fillings will save dentos from future decay, only on the same physical law, and their better adaptability to the situation :

That the theory of incompatibility to dentos, and consequent galvanic action, in proportion as they are incompatible, has nothing to do as a factor in permitting caries to again commence after the cavities have been filled, any more than it is the first exciting cause of caries in solid dentos :

That adaptability of dentos to material, and material to dentos, skilled hands, a brain equal to the task, and the final observance of this law of capillary force, will save, on common physical principles, well understood and capable of demonstration, more teeth, than by acting on the law of incompatibility :

That no theory or law, however positive and well understood, can be applied successfully, so long as we have in our ranks men who are neither compatible nor adaptable to their position :

That, in connection with well-grounded principles of practice, we must have men who are skilled artisans, and who know how to use

their digits; with a dental training first, and finally a medical education—so far as the general principles of surgery—the more the better. With such students going out from our schools, we can hope to keep caries in check, if not annihilate it.

To all this we may add that unless dentistry is practiced as a noble profession—and not as a trade—we cannot expect to rise in the world's estimation as laborers worthy of our hire, but will continue to fail, and be set down as mere money makers, and unworthy of our exalted calling.—*Trans. Odon. So. Penn.*

Diseased Roots.—I think many cases are lost by too much treatment. When a fistula is established I thoroughly cleanse the canal with tepid salt water, dry and pump into the root wood-creosote till I am satisfied some has reached to the abscess, then close the root at the first sitting. These cases have been the most successful. In the absence of a fistula I treat as follows: Cleanse thoroughly with tepid salt water, dry the canal, pump in wood-creosote and close the crown cavity with cotton and sandarac. This I repeat every other day. I seldom have to treat more than five times, usually less. Just as soon as there are no more evidences of pus I close the root, directing my patient to see me forthwith should trouble ensue, when counter-irritants usually are a sufficient remedy; and here I will say that of late I have made excellent use of mustard plasters. I consider them ahead of capsicum, which I formerly used. One trial will convince you of that fact.

Should counter remedies not prove sufficient I cut through the gum and alveolar plate to the root and cause thorough depletion, directing my patient to rub the finger over the wound to keep it from healing, but I am not often compelled to do this; these are only exceptional cases. I consider the principal points in root filling, first, thoroughness; second, no continuous metallic filling, and lastly, hand-pressure.—*J. Guttman.*

Chalfant's Pardon was brought about chiefly by the ingenious persistency of a woman. It will be remembered he was convicted in San Francisco several years ago, for the murder of Josiah Bacon, the representative of the Goodyear Rubber Co., and sentenced to ten years imprisonment. From the very first of his trouble, Mrs. Perkins sought to extricate him from his troubles. Though he was finally sent to the State prison, at San Quentin, she continued to interest herself in his welfare, and has recently been the means of procuring his pardon from the Governor. Mrs. Perkins is now to become Mrs. Chalfant.

FLASKING.

DR. H. W. HOWE, OF LAWRENCE, KANSAS.

I flask, make "ruga," and mend vulcanite plates in the following manner: When my case is ready for flasking I set it, as usual, in the shallow rim, fill with plaster to the edge of the rim of trial plate, oil, then set on the deep rim, pour in and jar down enough plaster to fill between the teeth and flask to come to the edge or a little above the top of the gum. I then put in dry plaster to fill nearly or quite to the cutting edges of the teeth, tamp it down well with the end of a lead pencil or my finger, till it absorbs moisture enough from below to dampen it. I then put on mixed plaster to fill from the cutting edges of teeth to the top of flask. Also fill up the heel of the flask to the posterior edge of the plate, leaving the palatine surface of the case uncovered. Trim off surplus plaster, oil the whole, and fill with mixed plaster, put on the top, and the case is flasked. Now I warm and separate. I find my work in three pieces, with the teeth in the rim where the pins are exposed and readily cleansed. The joints can be quickly filled if needed, but seldom needed if the dry plaster is well packed and joints good. Your plaster round the gums is as hard as it can possibly be, no shrinkage to open joints from pressure or to break blocks. I find the last piece cast in the shape of a plug, so to speak; this I can smooth off and with an instrument make depressions for ruga, lay on a piece of heavy tin foil, put on my rim and proceed to pack as usual, use liquid silex on the cast and proceed with your case. It is a great comfort to those who are obliged to wear artificial teeth to have them feel somewhat natural to the tongue. I have used it several years in my practice, and have never found anyone who would be without the "rough places" on their plates after using them. In this manner of flasking I find it very convenient to put in a "*cheap John job*" of mending a broken upper plate. I use the plate for a pattern, separate, boil the rim with the plate in, while soft remove plate and teeth, detach the teeth and replace them in the rim, put together and pack. I also use this mode in making combination gold and rubber plates, with or without gold rims.—*Archives of Dentistry.*

Attaching crowns to root with Gutta Percha is facilitated by pressing the crown home with a *hot* metal instrument. Let it be of sufficient weight to hold heat (and not made very hot), and a groove to receive the cutting surface of the crown that it may be held firm. The gutta-percha gradually warms and then the crown is carried to its place with ease and accuracy, and the gutta percha is sure to be forced in all under cuts. When this is done, immediately plunge the instrument into ice water and re-apply it to *set* the crown.

THE PERILS OF PRACTICE.

G. L. PARMELE, M. D., D. D. S., HARTFORD, CONN.

[Part of President's address of Connecticut Valley Society.]

The maintenance of the body and mind in as nearly a normal condition as possible is worthy of more consideration than many of us give it.

Confinement in poorly ventilated rooms, breathing air poisoned by the exhalations of patients, many of them victims of disease, working for hours at a time in constrained positions, inflicting necessary pain on nervous patients, causing nerve exhaustion in the operator, and the continuous concentration of vision on minute objects with the constant worry and perplexity of business, are some of the reasons why those conscientiously engaged in dental practice will break down after awhile unless they take means to counteract these baneful influences.

One of the greatest evils of modern life is mental overwork, and there is no constitution so adamantine as to resist continuous confinement, weariness, and worry. Work and play must alternate for nature too severely tried is sure to call the balance and enforce a settlement. The adage "All work and no play makes Jack a dull boy" is one of those common sayings which we must accept, whether we will or not. Each violent emotion or train of thought operates on the nutrition of the nerve centers, and continued worry and passion are more harmful than judicious hard labor.

With telegrams to keep them on the *qui vive*, and express trains to hurry them hither and thither, Americans live at too high pressure. The influence of active competition is such that they think a holiday or outing cannot be afforded to relieve them of that intense, unremitting application, which leads to mental strain.

Members of our profession are no exception, and I frequently hear them say, "I cannot afford to lose the time." There is nothing they can better afford to do. The time spent in frequent outings, breathing "God's oxygen" and relieving the strain of business is not lost. Renewed vigor compensates for the seeming loss of time; and the larger amount and better quality of work gives a better balance sheet. "I have sinned against my brother, the ass" (referring to his abused body), were the last words of St. Francis, of Assisi, when his self-inflicted martyrdom brought him to death's door.

We should all make a business of pleasure and recreation of mind and body. All medical men, who have given the subject thought, agree as to the increase of nervousness in Americans, produced by the chronic habit of constant excitement and push in our daily life, at home and abroad, sick or well. To hit the happy medium between under and overwork is no easy task. Many are injured by too little

work. When what was once considered a cheerful task requires an extra effort for its accomplishment, and, as a direct outcome of a worried and flagging brain, errors and omissions commence to manifest themselves, it is a sad mistake to spur the exhausted brain to increased vigor by improper forcing. "That which one desires to do must not be his guide, but that which he has power to do."

So long as a brain worker can eat and sleep well, and takes abundant exercise in the open air, it is not necessary to impose special limits to his working hours. But when he begins to worry over business affairs, and about the numerous personal perplexities which we can seldom escape, his brain constantly contriving some way out of the difficulties which beset him admits of no quiet for sleep. Lack of the necessary rest soon disturbs the nervous system, and is quickly followed by dyspepsia and fits of depression, two of the principle miseries of an overworked body.

After all, it is worry that does the harm rather than work. I once heard the late Dr. Beard say that the three W's—Wine, Women and Worry,—were the most fruitful causes of nervous shipwreck and insanity. I would not have you infer that I desire to picture dentistry as the most onerous of all labor, or that all who enter on it are on a sure road to a early grave. Far from it, for I believe a properly conducted dental practice is one of the most pleasant of all special fields of labor. Still, there are circumstances connected with it which tend to render it particularly dangerous to those who go at it with too much push, and who neglect hygenic laws. The same push would be much less injurious in many other occupations.

You ought to know "what to do to be saved" better than I can tell you, and it seems unnecessary for me to lay down the laws of health. I only wish to spur those who need it to a proper observance of those laws, and particularly to urge them to shorten their office hours, to take frequent holidays, to devote themselves to some hobby which requires active exercise in the open air, and, in fact, for those inclined to overdo, I advise a cultivation of laziness as to business, and activity in all open air life.

The surest of all prophylactics is active exercise in the open air. Air is a part of our daily food, and by far the most important, the purity of our blood depending on it. Jean Paul says: "On the day of judgment God will perhaps pardon you for starving your children when bread was dear, but if he should charge you with stinting them of his free air, what answer will you make?"

Physical exercise, by accelerating the circulation of the blood, stimulates the activity of all those internal organs whose functions conjointly constitute the phenomena of life, and counteracts innumerable

functional disorders, any one of which is sure to react on the nervous system.

Mirth is a good remedy. Men of a cheerful disposition are generally long lived, and anything tending to counteract the influence of worry and discontent contributes directly toward the preservation of health.

See to it that your offices and homes are in proper sanitary condition, and let me suggest, where practicable, a reversal of the general rule, and that you make your operating rooms large and airy, and your reception rooms, if necessary, the smaller of the two.

Never eat till you have time to digest, for we are not nourished by what we eat, but by what we assimilate.

Plenty of rest after meals is a good health rule. Wild animals, in obedience to instinct, seek out their hiding places after a heavy meal, and digest in peace. Let us follow their example. Digestion requires leisure. By attempting work while the stomach is full, we are unjust to ourselves, and to the labor we desire to perform.—*Connecticut Valley Society in Independent Practitioner.*

MENTHOL.—A LOCAL ANESTHETIC.

It is proposed (*Progres Medical*, Sept. 12,) to substitute this for cocaine. It has been known to the Japanese for 200 years. It is formed in the essences of menthe made in Asia, and is obtained in crystals by evaporating these essences. It exists in large proportion in the volatile oil of *mentha arvensis*. The preparation of menthe quiet the excessive sensibility of the laryngo-bronchial mucous membranes. They suppress the pain but not the sensibility. The tickling and desire to cough disappear. In a word, it is an antalgic remedy. Recently, Rosenberg has proposed to substitute it for cocaine. Its effect lasts from a quarter of an hour to an hour, or even an hour and a half. It is used in solution, alcoholic and oleaginous, of 20—50 per cent for the nasal mucous membrane, 10 per cent for the larynx, and weaker for the conjunctiva. It produces an anesthesia very pronounced, and seems to act with more energy on the ocular mucous membrane than on the buccal or nasal. It contracts the blood-vessels.—*Dental Register.*

“The Howland Crown.”—Dr. Davenport speaks highly of this crown having made use of it in many cases. They are simple, exceedingly easy of adjustment, and when in position present a much more natural appearance, inside and on the surface exposed, than any he has used.

Dr. J. B. Littig, and Dr. Dwinelle also highly commended it.

For Our Patients.

THE EFFECTS OF IMAGINATION.

DR. R. E. SPARKS, KINGSTON, CANADA.

I see in the *Canada Journal of Dental Science*, of June, 1869, what may be of interest to the readers of the ITEMS. It demonstrates how far some can be led away by their imagination.

"This morning a lady swallowed a full upper set of teeth on vulcanite. She is in the hands of a physician now. Her husband says she is not suffering, and can swallow. I intend to keep an eye on the case and will report. Dr. _____ says they must go through. I say no, they must come back. In a few days we received the following facts: After she found she had swallowed her teeth, she first called for her minister, and the servant ran for Rev. _____. Before he arrived she had started to Dr. _____'s. He made an examination, and felt the teeth in her throat. He commenced to give emetics, and says he gave her two grains, then three, then four, and continued till he had given her twenty grains of tartar emetic; yet no symptoms of nausea. He then gave her a bowl of wormwood, but she was proof against it all. At this stage of affairs the lady went home, and Dr. _____ hearing of the case went to the house, and after examination said the teeth must be cut out or she would die. Imagine the patient about to undergo a most formidable operation: Inclined on a couch, chloroform on hand, towels, sponges, bowls of warm water in readiness, and Dr. _____ drawing closer to his patient, who imagined her mortal career near at an end. The chloroform is applied; unconsciousness comes to the desponding woman; the plate of teeth are again felt in the throat; the knife is reached to make the incision. Just as he is about to plunge into the poor woman's throat for the teeth, the servant screams from the back room, 'Stay! here are the teeth on the floor!'"

One-half of the young men who come to Philadelphia and elsewhere to learn medicine or dentistry should be turned face about and sent to a village school. The place to intercept incompetents is at the entrance of colleges, rather than at their exit.—*Dr. J. E. Garretson.*

The time is coming when the continued neglect of the teeth will be looked on as a lack of good breeding. It should be so now. The neglect of a personal care of the teeth should be ranked with a similar neglect of the cleanliness of the face and hands. If one *must* be neglected, it is better that the hands should suffer.—*Health and Home.*

ADVICE TO THOSE WHO WEAR ARTIFICIAL TEETH.

The varied scenes and trials through which every one must pass before artificial teeth is necessary, are not easily forgotten. They remember how (in many cases by neglect) one tooth after another decayed, till the nerve became exposed and ulcers formed, producing the most excruciating pain; but now the last offending member has been extracted, and "my troubles are ended. I can now have artificial teeth in every way as good as natural ones." To correct some erroneous opinions on this point is the object of this article.

Artificial teeth, properly made, will answer many purposes of natural teeth, but no dentist can insert teeth which will answer those purposes *as well* as natural ones.

There are many difficulties attending the wearing artificial dentures which, in the main, by patience and perseverance, may be overcome.

1st. The presence of the plate in the mouth at first, specially when the patient has been without teeth for a long time, is a source of inconvenience. A few days of patient use will remove this trouble.

2d. Many complain of the plate chafing the gums, producing soreness. This difficulty comes mainly when the plate is inserted soon after the teeth are extracted; the gum heals over the sharp, bony points of the sockets; the plate pressing on the gum causes these points to cut through to the plate; in a few days these points will absorb, the gum heal, and the plate will be worn with ease. If the edge of the plate cuts into the contiguous muscle, of course, this edge should be cut back.

3d. Others complain that the plate produces an unpleasant taste in the mouth. This may be because it is made of base material; when good material is used, such as continuous gum, gold, or vulcanite, this difficulty will not exist, if the plate is kept clean. When eating, fine, starchy particles of food will adhere to the plate; if not removed, it will soon sour, producing an unpleasant taste. The plate should be cleansed after each meal.

4th. The difficulty most complained of, specially in full sets (and *partial* sets where clasps are discarded) is the inability to use the teeth, when first inserted. This difficulty occurs in every case to some degree, and to overcome it, much depends on the patience, perseverance, and aptness of the wearer. To be more explicit, the upper plate, is held up by suction, with a force varying from eight to fifteen pounds. The main object of this suction is to keep the plate from dropping when speaking, laughing, or eating.

The teeth are required to be set on the plate at an angle of from ten to twenty degrees. The force of an ordinary bite is about fifty pounds, which, if applied to the front teeth at this angle, in the same

manner in which we would bite with the natural teeth, would, of course, overcome the eight or fifteen pounds atmospheric pressure, causing the plate to tip. The same is true in chewing on one side of the mouth. To remedy this difficulty, it is necessary for the patient to learn to press the food against the front teeth at the same time they are brought together, and at first to learn to chew on both sides. To so learn this process, till it becomes a habit, usually requires some time.—*Allport's Dental Journal.*

Electricity in the Human Organism.—The living human organism is a self-sustaining battery. Throughout the entire body dissimilar substances are in contact; solids are associated with fluids, and as long as life remains, there is electric tension or play of the voltaic pile. The animal membranes and fluids are connected with nerve fibers, and constitute a most exquisite self-sustaining battery arrangement, yielding a kind of constant voltaic electricity modified by vitality.

It is a law of the voltaic circuit that no polarity can occur unless there is some difference in the two poles. The All-wise Architect has placed in the human cranium the nicest of his material work, crowning the electro-nerve circuit at the brain positive, and the peripheric or outer nerves of all the body and limbs the negative pole.

Electricity in the animal frame is the force by means of which all nervous action is excited; and when the natural electric state of a nerve is modified, the equilibrium is destroyed, and there results some sort of sensation or contraction, usually both.

The sum total of the entire apparatus of human life is but a balance of forces, and whatever conspires to disturb the equilibrium of the nervo-vital force, either from mental emotion or mechanical injury, produces a disturbance in the nerve batteries, according to the impression made or injury sustained.—*Dr. J. Hayes.*

Pain in the ears, or inflammation of the eyes, may be only a symptom of disease, and not the disease itself. The trouble is often in the teeth. A single diseased tooth may be the hidden cause of much trouble in other organs of the body.

An English barber, while cutting the hair of a gentleman, remarked.—

“I believe the cholera is in the *hair*.”

“Then” observed the customer, “you ought to be very careful of what brushes you use.”

“Oh, sir,” replied the barber laughing, “I did not mean the *air* of the *ed*, but the *hair* of the *hatmosphere*.

WHAT ARE PERMANENT FILLINGS?

Of course, speaking absolutely, none are permanent. All things earthly and physical are subject to deterioration and decay. A filling of a tooth cannot be more permanent than the tooth itself. Why should a filled tooth be expected to last longer than an unfilled one that has not yet decayed? Should we not expect a tooth that has once succumbed to decay may succumb again, though good work is done on it? A permanent filling, therefore is one so inserted as to do the tooth as good service as is possible under the circumstances. If the tooth is specially frail when filled you cannot expect it to last as long as a strong tooth, though the best of work is done on it. And the best of work *for that tooth* may not be the best for some other tooth. I once saw a beautiful lateral incisor split because the dentist tried to do such permanent work on it as would have been quite proper on a strong tooth.

THE DEAD NERVE—A SUGGESTION.

HELEN E. STARRETT.

It was a quivering, shivering thing
That shrank from its environing,
Within whose tiny, fibrous cell
Did such a power of suffering dwell,—
Such vast capacity for pain
That it could craze the tortured brain ;—
Could make life seem a demon's curse,
And darken all the universe.
And now it lies there cold and dead ;
The wondrous prisoner, life, has fled ;
Nor chill, nor fire, nor searching steel
Has any power to make it feel.

I wonder if this heart and brain,
Whose vast capacity for pain
Can make life seem a demon's curse
And darken all the universe,
And yet can know such blissful heights
Of happiness in love's delights,
Such joy in nature's beauteous life,
Such energies for conquering strife,
Are only the ephemeral shell
That holds a prisoner in its cell ?
And when the heart and brain are still,
And know no more of good or ill,—
Beneath the skies lie cold and dead,—
Where will that passionate life have fled ?
In all the universe, oh, where
Shall be that wondrous prisoner ?

—*The Weekly Magazine.*

Editorial.

MAN'S ORIGIN.

Some scientists make strong objections to the Bible record of the origin of man. But,

1st. Who among scientists has advanced a theory which others have not fiercely assailed? Objections to the Bible account does not harmonize these disputants.

2d. No scientist solves this question by science. By the ease with which they profess to annihilate the Scripture statements and by their vaunting of high sounding theories, one would suppose the subject was of easy solution. But when we really ask them to show us the way to life's genesis, they immediately begin to walk backward, and to stumble, as in a trackless search. They confess, instead of being able to take us directly or unmistakably to the beginning of things that from thence they may bring us with majestic tread up and up into the sphere of the perfection of physical organism, that they must commence here with the "climax of creation" and lead us backward. They must begin with what is, to show us where what is not. They commence with what they are, and bid us follow them to where they and their ancestors are not, as an evidence of what they may have been. Even in this backward course they do not act like intelligent men, confident of their steps from sequence to premise, but as men walking backward and without chart or logical deduction. No wonder they stumble. But, lo; they would have us believe that over which they stumble is that for which they searched—man's origin! They smooth down the creature's coarse hair, examine his toes and his teeth and his joints, make him stand erect and grin and eat,—and then they shout back,—“Lo; the ape!—this is the origin of man.” When we object that this cannot be the beginning—that according to their own theory, it is at best but a link in the chain,—they continue their backward search till they fall over a monkey, which they declare is the genesis of the ape! Do we object that this cannot be the beginning of things, and therefore cannot be the origin of man? Then they bid us follow them still farther into mist of uncertainty and on to the unsubstantial footing of speculations, always walking backward; on and still on, down and still down, creeping, crawling, stumbling—from the monkey into darkness and quagmires and slimy things, with only jack-o-lantern's as guides,—and still on and on, and down and down, where are things without eyes or ears or members, mere disgusting organisms of jelly that cannot act or feel or move; when we hear these silly men shout

back, "We have lost the link, we cannot find where life begins, whence it is, where it is, nor what it is!"

3d. The very theories and hypotheses of these men, and the stubborn facts they meet in their paths, confuses and contradicts them. As they look through all history, they find the glaring fact confronting them that, from the beginning, under all circumstances, and through all ages, and in all climes and in spite of all influence to change his nature, so far as we can trace his acts, his habits and his inherent character, man is man; nothing inferior, nothing different. The theory that where we lose his history we find his origin is only an hypothesis that this *might* be so, then that it *should* be so, and finally that it *is* so, *because* it is the necessary sequence of a pet theory.

4th. But what real objection has science to the Bible account? Mainly the perfection in which man is presented.

But let us consider: (1). Is it of necessity that we take the climax of the account as the account of all the stages which lead up to this perfection? The earth is first presented to us as elements without form, and void; then as a war of elements in fiercer commotion, finally mingling and combining to form a fluid; then a settling into something more substantial—the combining of elements to form the air and all the substances of the earth. Then the perfecting of this primitive unproductive earth—the gathering together of the waters on and above it, and the preparation for vegetable life; then for brute life; and finally for man with the perfection of all things. Because the fiat went forth at each of these great divisions for the perfection of each, must we of necessity see these various perfections without allowance for time, for maturing, and growth? The fiery elements preceded the water, the water preceded the mist, the mist preceded the rain, the rain preceded the perfected atmosphere, and the appearance of the sun. The first light was not from the sun, the first growth was not animal, and so the first life was not man. Mighty days were those seven periods, mighty growths were the secrets of those periods, and "very good" were these seven perfections, but each leading to its successor, till the blending of all formed a perfected whole.

But (2). Though it looks reasonable that thus all creation was by gradation, and all life was from a lower to a higher, and though the Scripture account does not conflict with this theory, could not the God of all this varied creation have created each perfect from its first existence, and caused these periods called days to have been short instead of long? Could He not have perfected the vegetable before he placed it in the ground, instead of producing it from the seed; and have created the fish instead of first creating the egg; and animals as matured animals instead of first as molecules? How can we limit a

being so Almighty? On what principle of reason or philosophy or science can we limit the Omnipotent One who can bring from nothing such a vast and such a perfected work?

And (3). As no theory of science comes back to the beginning of things to show the cause, the nature, and the properties of life, and the origin of man, and as the Scripture does give as simple an account of this as is possible for us to understand, why should its brief statement be thrust aside for any human invention which at best is unsatisfactory?

HOW SHALL WE TREAT DISEASE OF THE ANTRUM?

First, know what the antrum is. Make no excuse for ignorance, but immediately visit some one or place where a skull properly divided for this purpose is to be found; and, text book in hand, and, if possible, a living teacher by your side, study its whole construction, its proximity to the roots of the teeth, and the various troubles to which it is subject. What is the use of groping in the dark, striking at hazard, when by a few days' study you may walk in the light, and know where you are, and act intelligently? These cavities need not be a mysterious labyrinth to any one, nor their treatment difficult to an intelligent dentist.

Second, study thoroughly the diseases to which the antrum is subject. It is liable to several disturbances, as from blows, a deranged state of the blood, specially from syphilis. But nearly all the dentists will be called on to treat will be found to come from abscess teeth; and the extraction of these teeth will usually be the cure for the trouble. Many a dentist, as he extracts an upper tooth that has long been abscess, if he could look beyond the tooth and see the large amount of pus which has accumulated in the antrum, would be frightened at its condition. How many times, as the matter has poured out of the vacated socket, have we marveled where it all comes from. But if you could have seen the absorbing, eating, boring abscess or ulcer, as it slowly forced its way through the floor of the antrum, flooding it with its poisonous pus, and eating away the surrounding parts till its irritating fluid had spread over all its walls and disintegrated much of its surface, you would not be surprised. Sometimes the abnormal growth of the abscess, or the disintegrating effect of the ulcer, has not to go far to reach the antrum. In fact, in many instances, the apices of the roots of the teeth, by their natural growth are already in this cavity, or separated from it by only a mucous membrane. Is it not a wonder, therefore, there are not more serious consequences to the antrum from diseased teeth? And if all the matter which sometimes spurts out of the sockets of abscess or ulcerated teeth, comes

from the antrum, how is it possible for the disease to terminate without treatment after the extraction of the offending tooth? It is often marvellous that so many diseases of the eyes, ears, nose, face and neck should so often terminate with the extraction of a diseased tooth. We had a patient once sent us from a long distance by her physician who said a section of the lower jaw must be removed to cure a malignant ulceration. The extraction of a hidden abscess root cured all.

It may well be asked: If all the matter following the extraction of some teeth comes from the antrum, and indicates the diseased condition of that cavity, as well as the tooth that caused it, how is it possible for all to heal without medication? Nature is frequently her best physician. She does wonderful cures, and many cures we take the credit for, though the healing is in spite of our interference.

But there are times when interference, or rather assistance, is necessary; and then intelligence is all important. We cannot look into the cavity—or rather the labyrinth of cavities—but we should be able from knowledge previously obtained to judge by the symptoms, its condition, and its needs.

The first and most prominent feature is its septic condition, which will, of course, indicate antiseptics. Among these there are perhaps few medicaments better than carbolic acid. An opening will generally be found through the sockets out of which the abscess or ulcerated tooth has been taken, which can easily be enlarged; and it should be so enlarged that all diseased bone is removed. After the antrum is thoroughly cleansed with tepid water slightly salted and charged with carbolic acid, say 1 to 75 or 100, the entrance should be kept open, and the character of the discharge watched carefully. Of course, the entrance should be so guarded as to prevent the ingress of foreign substances. Two or three daily applications of the diluted carbolic acid may be necessary, and this should be done with the spray, and not with the syringe. The spray more thoroughly reaches all parts. A little of the compound tincture of iodin and iodoform to the carbolic acid is sometimes an improvement. Bichlorid of mercury, about 1 to 1000, or even weaker, should often follow the carbolic acid: for though the acid is one of our best antiseptics, the bichlorid of mercury is an excellent germicide. An astringent is also sometimes necessary.

In the treatment of all diseases we are apt to do too much than not enough. Assisting the recuperating processes of nature a little is generally sufficient, if it is done with intelligence. In this irritated, inflamed and perhaps suppurated condition of the antrum, all will generally go well if there is first a thorough cleansing of its surface. You will be astonished to see how surely the discharges become healthy and

how simultaneously the artificial entrance will be closed by a normal granulation of the boney wall, till the whole trouble passes away.

When the cure is effected, be sure to allow the patient to give you great credit, and be sure it is accompanied with ample compensation ; but be sure to pass most of the credit to the wise operations of nature.

PROXY WORK IN PROSTHETIC DENTISTRY.

Perhaps the chief reason why artificial teeth are not more natural, is because they are made so generally by proxy. Said a dentist to us the other day : "I can't afford to give personal attention to artificial teeth ; I take the impression and articulation and select the teeth and then pass the case to my workman."

"But how can he determine the special features of the wearer so as to make the teeth look natural ?"

"He has a disadvantage there, but I can't afford to bring him in contact with my patient. To maintain with him my professional relation, I must assume all responsibility—in fact I have assumed to make them. It would be undignified in me, and give my mechanic too great a prominence, to give him a chair and refer my patients to him."

Thus this man works by proxy, and really assumes a lie before his patient. No wonder this same "professional" man admitted to me that his neighbor "Cheap John" really made better teeth than he could. They were more natural in appearance and better made. "The fact is," said he, "this man gives his personal attention to every case, and he is so constantly at it, it is no wonder he excels. And yet, of course I cannot admit this to my patients. If I did they would be fools to pay me double his price."

It does seem to me that every dentist should either give his personal attention to his artificial work, or employ a competent workman to do it, with the understanding with his patient that this man is responsible for good work. Of course, therefore, he should have his chair and have the full control of the patient. Perhaps it is still better that he be a partner in the concern. We know several firms of this kind where everything works in harmony, and each has a pride in maintaining his reputation.

Decayed teeth is a real disfigurement. A gentleman of much prominence called on me the other day. His general physique was commanding, and his manners were prepossessing, but when he commenced to speak he revealed such a revolting sight of broken down teeth we hurried through his engagement as speedily as possible. We know a nice, intelligent, and amiable young lady who lost a prospective husband well calculated to be her mate, simply by neglecting her teeth.

The Differences between an Abscess and an Ulcer.—Many dentists and dental writers confound these terms. One writer says an alveolar abscess is "A circumscribed cavity containing pus," and an ulcer is "An open pus forming surface." It seems to us the distinction is much more marked. The pus of an abscess is contained in an organized sac; an ulcer has no sac. An abscess is always connected with a nerve, artery, and vein—is a fungus *growth* on the end of the nerve and blood-vessels which formerly supplied the tooth; an ulcer is the sloughing of a surface of an open cavity. An alveolus abscess is always on the apex of the root of a tooth and always indicates the death of the pulp of that root; an ulcer is generally on the side of the root, and does not indicate the death of the tooth but is often found there eating away the alveolus process, and even disintegrating the surface of the root while the tooth may be still alive and is not even carious. From these circumstances, an abscess almost always has fistulous opening, though sometimes so "blind" it cannot be found; an ulcer never has a fistula or fistulous opening proper, though if situated in the deep-seated muscles, or beneath them on a bone, it will generally have a circumscribed opening.

Tobacco is said to be largely the cause of Spurgeon's physical breakdown. He is realizing this now, but O, the power of habit! What a struggle it costs to get rid of it. But at best he cannot regain the good health, and nervous strength and tone it has deprived him of.

How foolish for any of us to commence the use of tobacco or intoxicants when we know a confirmed habit in either is so detrimental. For the use of either poison there is no good reason, and the legion of excuses are but subterfuges for self indulgence.

Which are right? In describing a tooth, some dentists speak of working *up* to the apex, and some say they are working *down* to it, irrespective of the jaw the tooth is in; others speak of the grinding surfaces of a tooth as its lower portion, if it is in the upper jaw, or of its being the upper portion, if it is in the lower jaw. Which are right?

A dentist reports "building *up* a tooth from the root." Are we necessarily to infer this was a lower tooth? Another says, "The tartar extended considerably below the gums." Was he "*of course*" speaking of lower teeth? Says another: "This man's teeth were so eroded by the poison that every tooth above and below had to be scraped and polished over all their lingual surface from the grinding edge to below their necks." Should he have said below and above their necks?

Pennsylvania Dental Society proceedings are just received. The men of this Society are doing a great work.

Regulating teeth is often a tedious, expensive, and painful process. We were in an office lately, where a young Miss was having a lateral incisor turned. A week had been spent on it with an apparatus which apparently should have turned it speedily, but which had hardly turned it at all.

"Take your forceps," said I, "and turn it at once."

"I would if it was not my own child," said the dentist. "I am afraid of the possible consequence, though I believe I could do it with impunity."

He finally did it, and was pleased with the readiness with which it was done, and the ease with which, by an adjusted cap, he afterward kept it in position till new bone formed to hold it in place.

We do not say all irregularities should be treated in this way, but with many teeth it is the easiest and best, especially if the alveolus round the tooth is first slightly absorbed by loosening the tooth.

Preliminary Studies to Dentistry.—Prof. W. P. Johnston, President of Tulane University, of Louisiana, suggests as a practical plan for the advancement of the dental profession in that State a one year's course in that institution, preparatory to the Dental College; a course which shall include English, Biology, Physiology, Physics, Mechanical Drawing and Manual Training, all to be taught by able men drawn from the highest institutes of learning. The special advantages gained by the two latter branches would be the training of the fingers to that delicacy of touch so essential in their profession, and of the eye to accurate measurement and judgment of color and form; they would also be trained—not as mechanics, but as artists—in the working of both wood and metals, and in the plastic arts. If this suggestion meets with favor, the privileges will be extended to both medical and dental students, and he hopes they will urge its adoption and accept its benefits.

A new source for Gutta.—The percha gutta, is so extensively used for insulation and other purposes that of late years its sufficient supply has become doubtful. Africa comes to the rescue. A gutta from the Karite tree of the upper basin of the Nile proves to be of equal value to the gutta percha. This tree the *Bassia Parkii* of the botanists hitherto has been valued only from the fatty substance of the consistency of tallow yielded by its seeds. By the natives this is called Karite butter and is used in cookery, for light in crude lamps, for making soap, for healing wounds, and as a pomatum for the hair. Thus another portion of this dark continent, which has hitherto been unproductive, now offers a source of wealth which only needs willing hands to gather.

MEETINGS OF STATE DENTAL SOCIETIES.

- California, San Francisco, Tuesday, July 20.
Connecticut, Hartford, Thursday, June 10.
Indiana, Indianapolis, Tuesday, June 29.
Minnesota, St. Paul, Wednesday, July 21.
Missouri, Sweet Springs, Tuesday, July 6.
New Jersey, Long Branch, Wednesday, July 21.
Pennsylvania, Cresson Springs, Tuesday, July 27.
Southern Dental, Nashville, Tuesday, July 27.

The Third Annual Meeting of the South Dakota Dental Society, will be held at Mitchell, Dakota, commencing June 19, at 7.30 o'clock, P. M., continuing three days, closing on the first day of the G. A. R. Encampment to be held at that time. A very interesting program has been prepared. A cordial invitation is extended to Dentists from other States to attend.

Aberdeen, D. T.

O. M. HUESTIS, Sec'y.

A VALUABLE WORK.

We have examined with great pleasure a little book entitled "Letters from a Mother to a Mother on Children's Teeth." " by Mrs. M. W. J.," and find it so full of good teaching and sensible advice for mothers, as well as of suggestions to others on the development, care and preservation of the teeth, that we take pleasure, not only in recommending it to all mothers who would act intelligently in this important subject, but to every person at all interested in the enjoyment of good health. It teaches, in plain terms, free from technical and scientific expressions, how the body is built, the teeth formed, diet to be followed, chemical elements of the teeth, dentition, care of the teeth by cleanliness and proper dental service when necessary; causes of decay, diseases resulting from decayed teeth, etc., and shows that proper diet and care of the health will improve the quality of the teeth and increase their usefulness. No mother who cares for the health and happiness of her children will fail to possess this valuable work. It is written by an intelligent mother, the wife of a dentist who has seen and heard much of the evils that ignorance of the laws of life brings on us. She seeks in this work to teach mothers the way to remedy these evils. It is highly indorsed by all leading dentists and by the Southern Dental Association. We are glad to announce that we can give it as a premium with *HEALTH AND HOME* at the regular subscription price of fifty cents a year. The book contains over 100 pages, and retails for twenty-five cents, but we would like to see it in every home in the land, so will give a copy free to every subscriber sending us fifty cents.

This book and *HEALTH AND HOME* are fit companions, as both aim to do a similar work—teaching people the value of sound teeth as a means to good health. Do not fail to get it. The book alone, post-paid to any address, for twenty-five cents in one or two-cent stamps.—*From Health and Home, Toledo, O.*

Miscellaneous.

INVERTED TOE-NAIL.

D. HAYES AGNEW, M.D.

Inverted toe-nails are of frequent occurrence; It is not true that the nails grow into the flesh, but owing to some irritation and side pressure there is an inflammation and proliferation of the soft tissues, which then bulge up round the nail and bury it. Want of cleanliness will act as a cause, the dead epithelium remaining about the toe acting as an irritant, but it is most frequently caused by a bad-fitting shoe. So also the majority of persons cut the nails wrong; it is a mistake to round off the corners—the nail should be cut square across. I think removing the nail is most always a mistake; there is scarcely any case which cannot be relieved by patience and perseverance; by patiently inserting some lint or cotton beneath the nail, and patiently making pressure on the elevated skin so as to reduce it. Of course, there must be no pressure from a bad-fitting shoe. Even then sometimes this treatment will not do, and we must remove the nail. I consider this is the most painful operation in surgery, hence you must always etherize the patient. When the patient is thoroughly anesthetized, I take a probe-pointed curet, and with it separate the matrix from the nail, when, with a pair of forceps, I draw it out. Sometimes, when the nail clings very tightly, it may be necessary to split it before we can remove it. After the nail has been removed, cover the raw surface with oiled lint or poultices for two days, after which we can use any kind of ointment. Another nail, growing in the place of the one removed, will be very apt to assume the same deformity as its predecessor, hence we must be very careful from the first to obviate the cause. Sometimes, when the nail has been greatly deformed, it may be well to destroy the matrix, so that another will not grow; when we wish to do this, we can pare round and cut out the matrix, and then apply caustic potash and dress with carbolized lint. In this event, a dense fibrous tissue will take the place of the nail, and serve as a fair covering for the toe. When you intend to save the nail, take a flat probe, and commencing at one edge, gradually work cotton under the nail, then make pressure on the flesh by means of a compress and adhesive plaster. Frequently I make this compression with a piece of cork cut wedge-shape. It is only in exceptional cases that you are justified in removing the nail.—*Med. and Surg. Reporter.*

The following is a good remedy for burns: Mix four ounces of the yolks of eggs with five ounces of pure glycerine. This forms a kind of varnish.

In the past year the richest American merchant, H. B. Clafin; the richest American railroad man, W. H. Vanderbilt; and the richest American planter, Edmond Richardson, have died. It is notable that not one of the three died in his bed. One dropped dead at his desk, another in his hall and the other in the street.—*Dubuque (Ia). Herald.*

FUEL OF THE FUTURE.

The house of the near future will have no fire-place, steam-pipes, chimneys or flues. Wood, coal, oil and other forms of fuel are about to disappear altogether in places having factories. Gas has become so cheap that already it is supplanting fuels. A single jet fairly heats a small room in cold weather. A New York artist has produced a simple design for heating entirely of gas at a merely nominal expense. It is a well-known fact that gas throws off no smoke, soot or dirt. The artist filled a brazier with chunks of colored glass and placed several jets beneath. The glass soon became heated sufficiently to thoroughly warm a room 10x30 feet in size. This design does away with the necessity for chimneys, since there is no smoke; the ventilation may be had at the window. The heat may be raised or lowered by simply regulating the flow of gas. The colored glass gives all the appearance of fire; there are black pieces to represent coal, red chunks for flame, yellowish white glass for white heat, blue glass for blue flame, and hues for all the remaining colors of the spectrum. Invention already is displacing the present fuels for furnaces and cooking ranges, and glass doing away with delay and such disagreeable objects as ashes, kindling-wood, etc.—*Cincinnati Artisan*.

Prussian botanists claim to have discovered the different species of trees from which the various kinds of amber once oozed. From their researches it would appear that once on a time the land which is now the Baltic Sea was a superb forest of conifers, some of them those giant trees that are to day the pride of California, others the cedars which still tower supreme in the East, with the firs, spruce and cypress of England and other countries.

To etch your name on steel tools, proceed as follows: Clean thoroughly of grease, and then spread a thin coat of beeswax, or paraffin, on it, the place where the name is to be. This must be as thin as possible. Then, with a sharp needle point, write through the wax to the steel. Paint this over with a mixture of nitric and muriatic acid, in the proportion of six to one, and, when bubbles cease to rise, the work is done. Wash in strong soda water.

A bronze color for iron work may be made by painting the iron with a thin paint near the color of the desired bronze, and when nearly dry brush the surface slightly with the bronze on a piece of fur.

Boots and shoes may be rendered water-proof by soaking them for some hours in thick soap water. The compound forms a fatty acid within the leather, and makes it impervious to water.

To remove paint splashes on window glass, moisten the spots with a strong solution of soda. Then rub hard.

For turning and drilling wrought-iron and steel, one ounce of a mixture of soft soap, with half its weight of pearl-ash in about one gallon of boiling water, is in everyday use in most engineering shops. The work, though constantly moist, does not rust.

If it is desirable to set up an anvil so that its use will make the least possible noise, set the anvil on a block of lead; or make a putty ledge around the anvil on the wooden block, one-half inch clear all round, one inch high. Raise the anvil clear of the block one-half inch, by any means available, pour in the lead till it rises above the bottom of the anvil; or set the anvil on a good bed of sand held in a box.

To take away ink spots from paper, take a thick blotting paper or board, steep it several times in a solution of oxalic acid or oxalate of potassium. Then dry it. If there is a spot to be taken away, apply the blotter, which has been prepared in this fashion, to it. In proceeding thus, the ink is entirely removed. The blotter drinks up the ink, and whitens the paper at the same time.

Paraffin rubbed on the dry walls and bottom of a cistern and melted into a cement with a hot iron is the most effectual method of keeping the water soft or free from lime. Cisterns, when plastered with pure Portland cement, generally give satisfaction.

By washing a pine floor with a solution of one pound of copperas in one gallon of strong lye, the appearance of oak flooring may be produced.

"I will give any man \$100.000 who will produce anything that will prevent a wall of pressed brick from turning white," says a prominent architect.

Cucumber peelings will speedily rid a house of cock roaches. Leave the fresh rinds and renew them daily, where these pests frequent.

A shovelful of hot coals held over varnished furniture will, it is said, take out spots and stains. Rub the place while warm with flannel.

A tallow candle or piece of tallow wrapped in tissue paper and laid among furs or other garments will, it is said, prevent the ravages of moths. It is also preventive of the Buffalo bug.

It is said that white silk lace can be cleaned by washing in benzine. It is best to do this work out of doors, away from fires and lights.

Mortar and paint may be removed from window-glass with hot, sharp vinegar.

There is a goose farm in Virginia on which are kept some 5,000 geese. The main object is the production of down.

A good authority says that a first-class cement, with which to fasten stone to stone, or iron to iron, is made by mixing a paste of pure oxide of lead, litharge and glycerine. The mixture hardens rapidly, is insoluble in acids, and is not affected by heat. It has been used to fasten the different portions of a fly-wheel with success, while placed between stones and once hardened, it is easier to break the stone than the joint.

The New York *Sun*, has the following: "Almost immediately on the Rev. Sam Small's renunciation of chewing tobacco comes a declaration from the Rev. Sam Jones, that henceforth for him there shall be no tobacco of any kind. He says: 'I find I have a habit, which is called a stumbling-block to others by good Christians in the North, and I announce to you to-night that you can say Sam Jones has no habits that will be a stumbling-block to anybody.' [Tremendous applause.] Both Sams have been represented as preachers of uncommon power, but we doubt if they ever preached as effective a sermon as they have enacted by thus giving up something they were doubtless very fond of. It is as hard to give up the use of tobacco as of rum. Two points of difference exist: The tobacco chewer is taking it all the time, except when asleep or at meals; the excessive smoker much of the time; while the user of alcohol—except the sot—takes his stimulant at considerable intervals. The user of alcohol may be in danger of drunkenness, the tobacco user is not. Hence to keep the resolution to quit tobacco is difficult. Sam Jones proves his devotion to his work. Let tobacco-using ministers and Sunday School superintendents follow so good an example.

And how about tobacco using dentists?—Editor ITEMS.

"Since Grant died," said Gen. George A. Sheridan in a lecture on Thursday evening, "I have had a kindlier feeling for death than ever before. Somehow I believe that the grim slayer, moved by admiration for the soldier who was making such a splendid fight against him, and awed by the depth and majesty of the love that moved his pen across the weary pages, held back the final shaft till the old hero's work was done and his soul could pass out tranquil and untroubled by thought of danger to his loved ones."

A PHYSICIAN in a Western State sends as a sample of a crystalline salt obtained by evaporating a "compound oxygen treatment" sold in his vicinity. The directions for use are, to place the solution in an inhaler, and breathe through it. The salt, on analysis, proves to be *nitrate of ammonia*; and the "compound oxygen" obtained by inhaling through a solution of this salt would be simply *common air*; and nothing more. Compound oxygen appears to be in unusual favor in the West at present; but it is difficult to see why the manufacturer of this particular treatment should have selected the somewhat expensive nitrate of ammonia, when common salt, sand, or even pure water, would have answered his purpose equally well. There is no such substance known to chemists as compound oxygen; and the only effect of the numerous and widely advertised "treatments" is to produce an anemic condition of the pocketbook, which is rarely agreeable to the patient.—*Science News*.

The fruit production of California is something wonderful. During 1885 she produced in raisins over 9,000,000 pounds, or nearly three times as much as in 1884. She also sent to market last year 1,500,000 pounds of prunes; 1,823,000 pounds of apples; 1,900,000 pounds of peaches; 1,139,000 pounds of plums; 650,000 pounds of apricots; 2,250,000 pounds of honey; 1,250,000 pounds of walnuts; 1,050,000 pounds of almonds.